

Memo:

To: Stefani Spencer, Lisa Spinelli
From: Dan Kenney
Date: 5 March 2019
Re: White Pine Project RHCA fuel treatment

1. Based on Cheryl Probert's decision (expressed on the February 12, 2019 conference call) that fuel treatment within RHCAs for the White Pine project are appropriate (and consistent with INFISH), I have developed a proposal accommodating treatments that should minimize adverse effects on RMOs and other riparian and stream channel conditions.

2. I've reviewed the available literature on the subject (and have attached the most recent FS publication on the subject that I am aware of, Dwire et al. 2016) and the consensus seems to be that activities outside of 1/2 of a site-potential tree height (SPTH) are most likely to avoid adverse effects on the function of stream channels/waterbodies and riparian areas. Although SPTH is a prominent alternative in INFISH and PACFISH to using the default buffer widths, the metric hasn't been used (to my knowledge) in projects I've been involved with on the NPCNF, so I can't come up with a citation for a general North Zone SPTH, but suspect that it is about 100 feet, and so 1/2 SPTH is 50 feet.

3. Specifically, activities outside of 50 feet should generally not substantially affect stream shading, large woody debris and other organic inputs, and streambank protection from erosion. However, reduction in vegetation, down woody debris, and duff could reduce interception of fine sediment, especially on steep sites, and there could be undesirable changes in microclimate. Because the fishbearing streams surveyed in the WP project area are substantially burdened by fine sediment, my proposals primarily attempt to protect the ability of the riparian buffers to intercept fine sediment caused by management actions and natural events.

4. So, I propose that WP fuel treatment activities outside of a 50-ft buffer be conducted as currently proposed (or developed in the future) with some exceptions. Below are Lisa's December 13 proposals on this subject, with my proposed modifications, which are intended to apply to both perennial and intermittent non-fishbearing streams in the Palouse River drainage:

- No heavy equipment would operate within the RHCA. Only hand work using chainsaws, pruning poles, and other hand tools would be accomplished, with sub-merchantable trees (less than 5 OK inches DBH) and brush/vegetation creating surface and ladder fuel being targeted.
- Treatment would be limited to slopes of 50% or less.
- No treatment would be applied within 25 ft. OK of perennial, or 10 15 ft. of intermittent stream channels (or stream terrace, whichever comes first), and 10 ft. of wetlands less than one acre.
- ~~No treatment would be applied in the lower xxx ft. reach of perennial streams.~~ Units (with one exception) aren't close to fish-bearing streams, so this measure not necessary
- Handpiles would be placed no closer than XXX 50 ft. of perennial, and XXX 25 ft. of intermittent streams and would be limited to 8 ft. OK in diameter and 25 ft. OK apart. Material greater than 6 4 inches diameter would not be included in piles but would be left on site as coarse woody debris.
- With the exception of the limited handpiles, there would be no direct ignition within the RHCA 50 ft of waterbodies/stream channels

5. Please note that I have proposed some activities within the 1/2 SPTH metric to ensure that some treatment of the intermittent stream buffers (default 50-feet) would be implementable and to facilitate desired activities in proximity to perennial streams. I have proposed that handpiles be moved away from hand treatment areas to reduce areas of bare soil in proximity to stream channels, and request that some smaller piece of treatment-generated and existing down woody debris be retained and to help intercept fine sediment movement. Also, from my reading of the literature, broadcast and jackpot burning ignition outside of the 1/2 SPTH distance (with potential unsuppressed “creep” toward the channel) should be consistent with maintenance of INFISH objectives.

6. Because of the presence of a conservation population of Sensitive redband trout in the upper Hangman Creek drainage, I propose that the PDF WQ-3 regarding a 150-ft buffer on all mapped stream channels in the Hangman Creek drainage be interpreted to confine fuel treatment there to broadcast burning with ignition outside of the buffer. The SW corner of Unit F12 is in proximity to a portion of the Conrad Creek channel shown on GIS as fishbearing, and so a full 300-ft buffer no-ignition buffer is appropriate here.

7. I believe that my recommendations for RHCA treatments in this project are appropriate for INFISH compliance in an area with no ESA-listed aquatic species, but may not be consistent for INFISH/PACFISH/ESA Section 7 compliance where bull trout or steelhead individuals or Critical Habitat are present.